

CLAIMS

What is claimed is:

1. An anchoring element for use in bone, the anchoring element comprising:
a first surface having a distal end and a proximal end, at least a portion of
the first surface including a first external thread having a pitch;
an abutment surface disposed toward the proximal end of the first surface;
an annular second surface disposed toward the distal end of the first
surface and joined to the first surface along an outer circumference
of the second surface;
a third surface concentric with the first surface and joined to the second
surface along an inner circumference of the second surface; and
a fourth surface disposed between the distal end and the proximal end of
the first surface and joined to the third surface along an outer
circumference of the fourth surface.
2. The anchoring element of claim 1 wherein the first surface includes a
frustrated first conical portion adjacent the distal end such that a smaller
circumference of the first conical portion is adjacent the distal end.
3. The anchoring element of claim 1 wherein the third surface includes a
frustrated second conical portion adjacent the distal end such that a larger
circumference of the second conical portion is adjacent the distal end.
4. The anchoring element of claim 1 wherein at least a portion of the third
surface includes an internal thread having the pitch of the first external
thread.
5. The anchoring element of claim 4 wherein the internal thread is self-
threading.
6. The anchoring element of claim 1 wherein the fourth surface is annular,
the anchoring element further comprising:

a fifth surface concentric with the first surface and joined to the fourth surface along an inner circumference of the fourth surface; and a sixth surface disposed toward the distal end of the first surface and joined to the fifth surface along an outer circumference of the sixth surface.

7. The anchoring element of claim 6 wherein the fifth surface includes a frustrated third conical portion adjacent the distal end such that a smaller circumference of the third conical portion is adjacent the distal end.
8. The anchoring element of claim 6 wherein the first surface, the second surface, the third surface, and the fourth surface are on a first part, the fifth surface and the sixth surface are on a second part, and the fifth surface is placed adjacent to the fourth surface by passing the second part through the first part.
9. The anchoring element of claim 6 wherein the first surface, the second surface, and the third surface are on a first part, the fourth surface, the fifth surface, and the sixth surface are on a second part, and the fourth surface is placed adjacent to the third surface by passing the second part through the first part.
10. The anchoring element of claim 6 wherein at least a portion of the third surface includes a first internal thread having the pitch of the first external thread and at least a portion of the fifth surface includes a second external thread having the pitch of the first external thread.
11. The anchoring element of claim 1 wherein the abutment surface is at an angle to an axis from the proximal end to the distal end of the first surface.
12. An anchoring element suitable for placement in a prepared molar socket that includes interradicular bone, the anchoring element comprising:
abutment means for receiving a dental prosthesis;
first means for threadedly engaging an outer wall of the molar socket;

second means for bearing against a bottom surface of the molar socket;
and

third means for bearing against a first surface of the interradicular bone
that generally faces the outer wall of the molar socket.

13. The anchoring element of claim 12 wherein the first means includes a frustrated first conical portion adjacent the second means such that a smaller circumference of the first conical portion is adjacent the second means.
14. The anchoring element of claim 12 wherein the third means is further for compressing the interradicular bone.
15. The anchoring element of claim 12 wherein the third means is further for threadedly engaging the first surface of the interradicular bone.
16. The anchoring element of claim 15 wherein the third means is further for cutting a thread in the first surface of the interradicular bone.
17. The anchoring element of claim 12 further comprising:
fifth means for bearing against a side wall of a hole prepared in the
interradicular bone.
18. The anchoring element of claim 17 wherein the fifth means is further for compressing the interradicular bone.
19. The anchoring element of claim 17 wherein the fifth means is further for threadedly engaging the side wall of the hole in the interradicular bone.
20. A method for placing an anchoring element to receive a dental prosthesis in a molar socket that includes interradicular bone, the method comprising:
cutting a generally cylindrical outer wall in the molar socket to receive a
first surface of the anchoring element, the first surface having a
distal end and a proximal end, at least a portion of the first surface
including a first external thread having a pitch;

cutting a generally annular flat surface in the molar socket at a distal end of the cylindrical outer wall to receive an annular second surface of the anchoring element, the second surface being disposed toward the distal end of the first surface and joined to the first surface along an outer circumference of the second surface;

cutting a generally cylindrical surface on the interradicular bone that generally faces the outer wall of the molar socket to receive a third surface of the anchoring element, the third surface being concentric with the first surface and joined to the second surface along an inner circumference of the second surface;

placing the anchoring element into the molar socket by screwing the first surface into the outer wall of the molar socket until the second surface of the anchoring element bears against the annular flat surface in the molar socket and the third surface of the anchoring element bears against the cylindrical surface on the interradicular bone.